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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,131	01/31/2001	Michel Marcel Jose Decre	PHNL000078	5393

7590

11/06/2002

Corporate Patent Counsel
U.S. Philips Corporation
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EXAMINER

JOLLEY, KIRSTEN

ART UNIT	PAPER NUMBER
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1762

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DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/773,131

Applicant(s)

DECRE, MICHEL MARCEL JOSE

Examiner

Kirsten Crockford Jolley

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 9-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-8 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that in this case there is no serious burden on the examiner to examine all the groups of claims because the inventions of the different groups are so related that a search performed for any of the groups of claims would be sufficient for examining all the other groups of claims. This is not found persuasive because the considerations used for examining method claims are different than those used for examining product claims. Product claims are examined based on the properties of the final article produced, not on the method used to create the article. There is a burden based on the different issues that arise in examining the different classes of invention. When examining claims directed to a coated product, the applicable art includes art directed to Applicant's final coated substrate produced by any method that would reasonably give that same product. The prior art used to reject the product claims would not necessarily contain the method steps of the coating process claims. Therefore applicable art for a method of coating do not necessarily encompass all the fields of search required for product claims and therefore there is an additional burden in examining the two classes of invention.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

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2. Claim 1 is objected to because of the following informalities: In claim 1, line 10, the Examiner suggests changing "circumferentially" to --circumferential-- for grammatical reasons. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Scheu et al. (US 4,024,835).

Scheu et al. discloses applying photoresist liquid onto a first surface of a substrate and rotating the substrate to spread the liquid. Scheu et al. teaches at col. 2, lines 14-24 and Figure 3B that the substrate 115 is received in a recessed area 305 of spin chuck 310, whereby the depth of the recessed portion is approximately equal to the thickness of the substrate, providing an essentially flat/flush surface between the substrate and spin chuck. It is the Examiner's position that some of the solvent in the photoresist coating of Scheu et al. would inherently be evaporated during Scheu et al.'s spinning step by evaporation, thereby solidifying the photoresist coating at least partially; this phenomenon is well known and researched in the spin coating art.

While it is acknowledged that the substrate in Scheu et al. is not a circular optical storage disc, the Examiner notes that the preamble is not a limitation on the claims if it merely states the purpose or intended use, and the remainder of the claim completely defines the invention

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independent of the preamble. *Stewart-Warner Corp. v. City of Pontiac, Mich.* 219 USPQ 1162; *Marston v. J.C. Penny Co., Inc.* 148 USPQ 25; and *Kropa v. Robie and Mahlman*, 88 USPQ 478.

As to claim 2, it is noted that the spin chuck, or extension body, in Scheu et al. is circular. As to claim 8, Scheu et al. teaches that the photoresist liquid is exposed to UV light after it is applied to the substrate (col. 1, lines 9-12); such a step would result in solidification of the photoresist liquid.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheu et al.

With respect to claims 3 and 4, Scheu et al. lacks a teaching that the outer periphery of the spin chuck/extension body has a polygonal shape. The Examiner notes that Scheu et al. teaches that non-uniform coating results are achieved when using oblong shaped substrates. Therefore, it is the Examiner's position that it would have been obvious for one having ordinary skill in the art to have also used a non-circular, non-oblong spin chuck instead of a circular spin chuck, such as a square or hexagon or octagon (which are all regular polygonal shapes), with the expectation of achieving similar successful results since Scheu et al. teaches that the non-uniform coating are the result of spin coating on oblong substrates and such shapes are not oblong and approach a circular shape.

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With respect to claim 5, Scheu et al. lacks a teaching of the material of the spin chuck, or that it is substantially the same material as that of the substrate. It is the Examiner's position that it would have been obvious for one having ordinary skill in the art to have used a material for the spin chuck in Scheu et al. that is substantially similar to that of the substrate since one would desire that the photoresist material flows the same across the surface of the spin chuck as it does across the top of the substrate in order to get a uniform coating on the entire substrate surface. If this is not the case, and the surface of the spin chuck has a surface where the photoresist does not spread as easily as on the substrate surface, then the photoresist material would bead up at the edge of the substrate and negate the purpose of the spin chuck to provide a uniform coating. Alternatively, if the surface of the spin chuck has a surface where the photoresist spreads significantly more quickly than on the substrate surface, then the photoresist material would be pulled from the edge of the substrate by the surface tension of the photoresist already on the surface of the spin chuck, thus also resulting in a non-uniform coating on the substrate.

As to claim 6, Scheu et al. lacks a teaching of the material of the spin chuck, or that it comprises a material to which the coating adheres relatively poorly. It is the Examiner's position that it would have been obvious for one having ordinary skill in the art to have used a coating on the spin chuck where the coating material does not adhere well because then it will be easier to clean the spin chuck, particularly since it would be necessary to clean the surface of the spin chuck between each application of coating material in order to achieve uniform coatings thereon.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scheu et al. as applied to claims 1-6 and 8 above, and further in view of Konishi et al. (US 6,012,858).

Scheu et al. lacks a teaching of using a spin chuck/extension body which is comprised of two parts. Konishi et al. discloses an extension body/liquid-receiving base 32 which forms a surface flush with the substrate W's surface (see Figure 6 and Figures 14A-14B, and col. 6, lines 1-7), similar to that used in Scheu et al. Figure 17 of Konishi et al. demonstrates that its liquid-receiving base may be formed of two parts 32a and 32b. It would have been obvious to one having ordinary skill in the art to have used a two-part extension body fitted around the substrate on the spin chuck in the method of Scheu et al., upon seeing the apparatus of Konishi et al., with the expectation of having an easier means for removal of the substrate and easier means for cleaning the extension body surfaces which are coated.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sakai et al. (US 6,090,205) is cited to demonstrate a surface that is formed flush with the substrate surface (see Figure 2) in a method of spin coating the substrate with developer solution. Beltz et al. (US 4,451,507) is cited for its teaching that similar apparatus may be used for semiconductor photoresist coating methods and optical disc coating methods (col. 2, lines 49-68).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten Crockford Jolley whose telephone number is 703-306-5461. The examiner can normally be reached on Monday to Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 703-308-2333. The fax phone numbers for the

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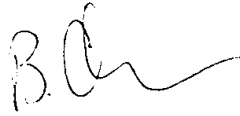
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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1193.

kcj

November 4, 2002


BRET CHEN
PRIMARY EXAMINER